

# UPDATE ON EUROPEAN CITIES' EXPERIENCE IN FOOD WASTE PREVENTION

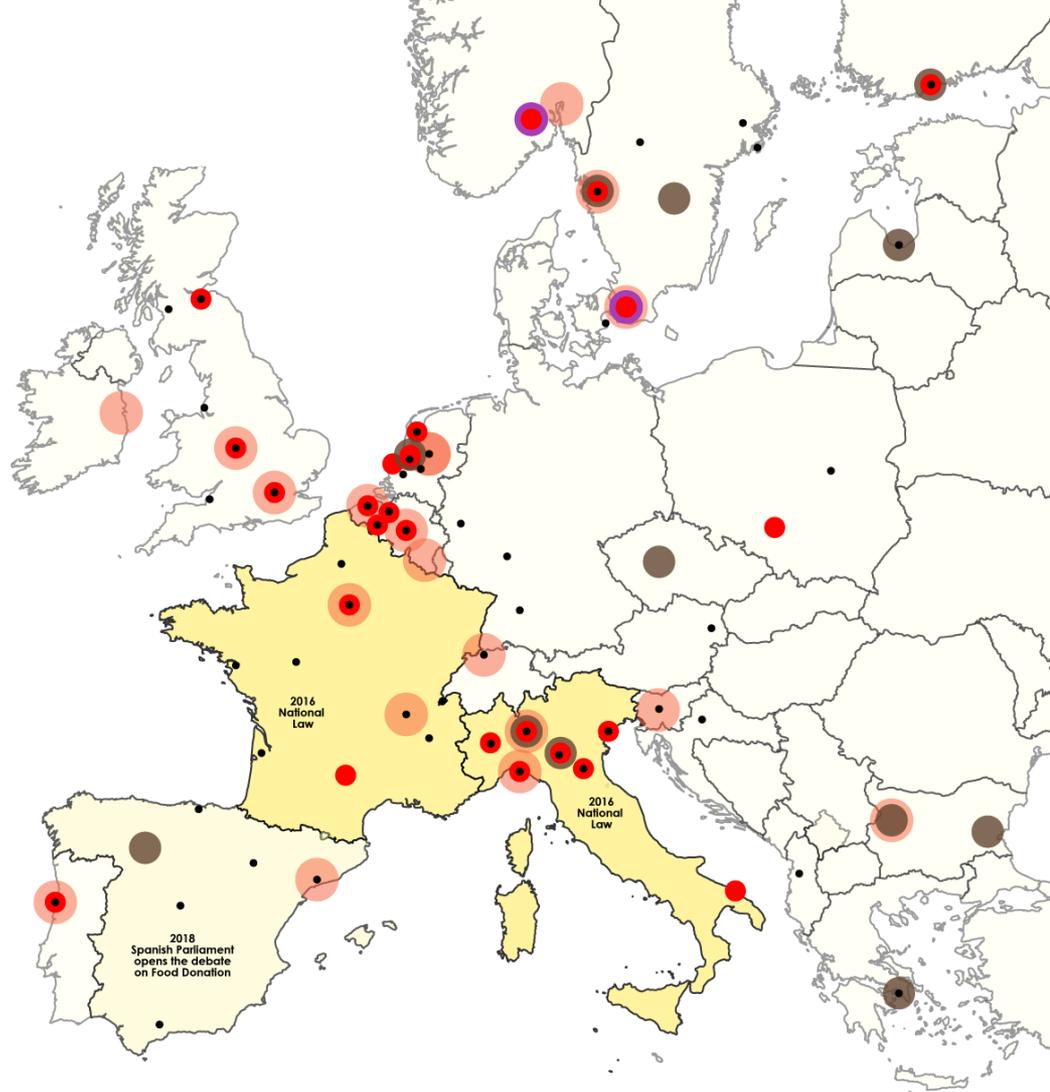


**Andrea Magarini**

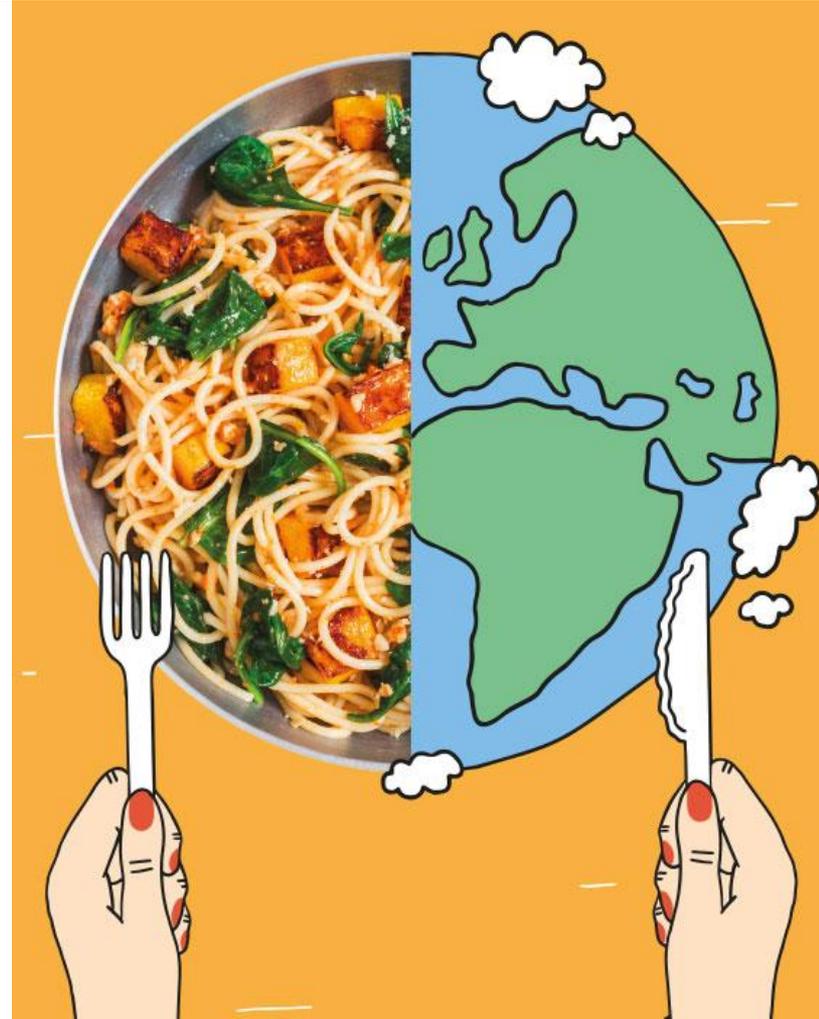
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Veghel, 2 October 2018



1. Food Waste in Research and Innovation policy framework **FOOD2030**
2. Showcases of urban actions within **Milan Pact Award**
3. Indicators on FLW in the **Monitoring Framework** MUFPP-FAO
4. Q&A



## FOOD 2030 PRIORITIES

### NUTRITION

for sustainable and healthy diets

### CLIMATE

smart and environmentally  
sustainable food systems

### CIRCULARITY

and resource efficiency  
of food systems

### INNOVATION

and empowerment of communities



## FOOD 2030 PRIORITY

### NUTRITION

for sustainable and healthy diets

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smart and environmentally sustainable food systems

### CIRCULARITY

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and empowerment of communities



## DRIVERS FOR INNOVATION

### Stakeholder engagement

Involving of key players in the definition of common actions

### Co-creation

Engaging wide range of actors (shareholders and stakeholders) for a common process of design and coordination on joint efforts

### Citizen science

Involving citizens in the research processes

### Business Model

Moving from project practices to actions that can be prototype also for the market



# SIDED EVENT DURING HIGH LEVEL FOOD2030 EVENT – PLOVDIV (BULGARIA)



## EDE Political commitment for a food governance INN



2015 start (after MUFPF)  
 #FoodStrategy  
 #LocalEmpowerment  
 #FoodGovernance

## MILAN Circular economy for food donation CIR



2017 start (after MUFPF)  
 #TaxReduction  
 #SocialActors  
 #Market

## COPENHAGEN 90% Organic food procurement CLI



2002 start (before MUFPF)  
 #Biodiversity  
 #RuralDevelopment  
 #Beekeeping  
 #Education

## BIRMINGHAM Public health against obesity NUT



2016 start (after MUFPF)  
 #ChildhoodObesity  
 #CommunityCookingClasses  
 #PhysicalActivity

## BORDEAUX Metropolitan food council INN



2017 start (after MUFPF)  
 #MetropolitanGovernance  
 #ActorsInclusion  
 #FoodCouncil

## BRUGES Food waste reduction in healthcare CIR



2017 start (after MUFPF)  
 #Hospital  
 #FoodCouncil  
 #ParticipatoryProcess  
 #UrbanInfrastructure

## RIGA Biomass heat for greenhouse production CLI

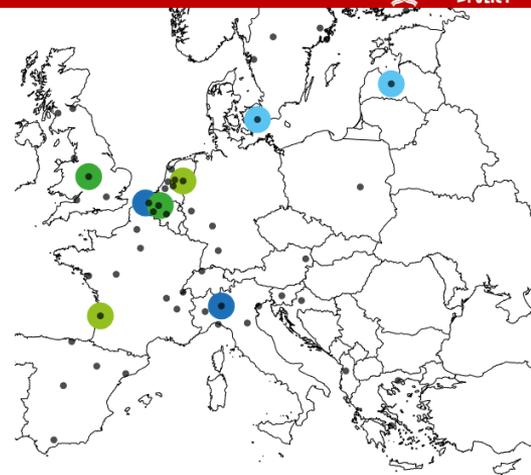


2011 start (before MUFPF)  
 #GreenEnergy  
 #Biogas  
 #FoodWaste  
 #UrbanInfrastructure

## GHENT Healthy and sustainable school meals NUT

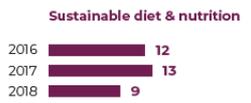


2017 start (after MUFPF)  
 #SchoolMeals  
 #RuralDevelopment  
 #Beekeeping  
 #Education



Engagement of researchers to work with cities on the priority of FOOD2030 and citizen-driven innovative approach

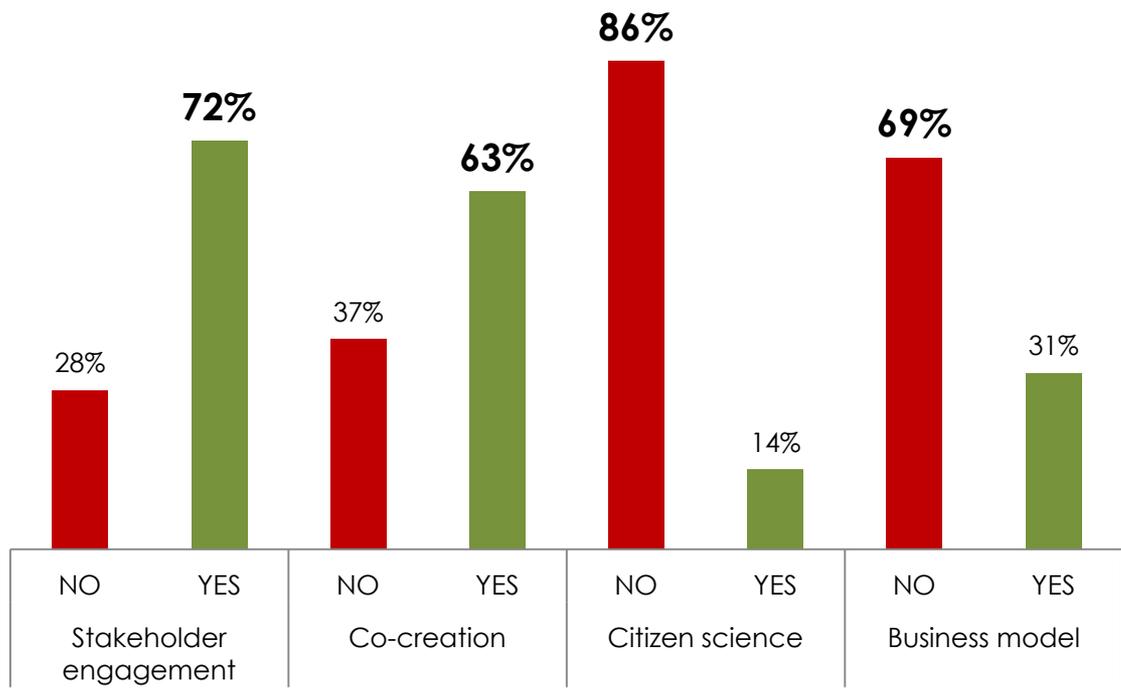




## Food waste



The driver selected by FOOD2030 as innovative approach in cities for **citizen-driven** innovation is now focused on **stakeholder engagement** and **co-creation processes**, citizens are only rarely involved in the **scientific process**, whereas cities fail to propose practices with efficient **business model** to reach/enter the market.



to gain information on the quality, quantity, choice and timing of meals and the way they are being served. The solutions were transferred to other healthcare institutions in Bruges and the region of Flanders through a manual and a dissemination event. Along with healthcare institutions, FoodWIN (European Food Waste Innovation Network supporting European cities to reduce food waste) and the Food Lab of Bruges were also involved in the innovation process.

#### Results and lessons learned

First measurements showed that there is 30 to 40 percent of food waste in the institutions.

Some preliminary results of one of the participating projects are promising. They show that food waste can be **reduced annually by 27 652 kg**, which is equivalent to 88 487 kg CO<sub>2</sub> per year. Converted to food cost, this means a yearly EUR 27 652 cost reduction. Along with the direct ecological and economic impact in the participating institutions, this project also has an indirect **educational impact**, thanks to the dissemination events. Besides prevention, the project also focuses on valorization of food waste, through donations to local food banks.

Beyond quantifiable results, the main innovation proposed by this practice lies in its participatory approach, which was fundamental in addressing the complexities of tackling food waste in the healthcare sector. The experience from the Municipality of Bruges highlights the **key role of the personnel** of the healthcare institutions, who were actively involved in the project. In fact, food waste within these institutions is often caused by subtleties in communication, logistics or patient dissatisfaction. Nurses, nutritionists and kitchen personnel are therefore in key positions to create tailored solutions. The process also engaged hospital staff to carry out the measurements themselves, not only to ensure frequent replication of measurements without need for outside experts, but also to raise awareness. Moreover, by drawing attention to the amounts of food that is wasted, staff understand the urgency of the problem and become promoters of the changes



sofbi.org/foodpolicy/pact

## Best 50 cases Milan Pact Award

#### Context

In 2015, the city of Bruges facilitated a bottom-up process to build a sustainable food policy. This resulted in the establishment of the **Food Lab of Bruges**, a platform where local stakeholders drew up the food guidelines of the city. One of their two guidelines targeting food waste was **reducing food waste in public organizations**. In reaction to these guidelines, the facility managers of hospital AZ Sint-Jan and hospital AZ Sint-Lucas expressed their need of guidance in reducing food waste in their institution. Recent research shows that food waste is a major problem in the healthcare sector and could reach up to 40 percent of city total waste. The potential to reduce food waste is hence enormous. However, the sector faces unique challenges: healthcare structures create personalized dietary options based on the health status of patients and they frequently serve non-voluntary consumers and unpredictable numbers of clients. On top of that, it is often not straightforward to gather the different stakeholders along the food chain of the healthcare institutions. This makes food waste reduction a complicated effort. To tackle this, the Municipality of Bruges coordinated an immersive, participatory process of measurement, ideation, evaluation and refinement of food waste reduction approaches in the healthcare sector of the city.

#### Overview of the food practice

Together with multiple stakeholders, the city of Bruges facilitated and coordinated an innovative project based on international tools and methods. The overall objective was to find solutions for reducing food waste in healthcare institutions, through a **participatory approach**. Bruges counts 19 healthcare institutions, four of which are actively involved in this project, including:

- Hospital AZ Sint-Jan, counting 909 beds on 3 campuses;
- Hospital AZ Sint-Lucas, counting 412 beds;
- Rudderstove, a catering operator serving six care institutions related to the public centre for social welfare (OCMW);
- Day Centre "De Kade", which houses 158 patients of which 112 are children.

The first step of the process was to measure and analyse current food waste and its economic impact in four healthcare institutions in Bruges. The following step was to support them in reducing food waste by coaching them. The final step consisted of developing and disseminating **successful methodologies** to reduce food waste in healthcare institutions and raise awareness on the topic. The personnel of the healthcare structures were trained in measuring food waste and actively involved in an innovation process to develop specific solutions to challenges within their institution. Furthermore, surveys were conducted among personnel, patients and visitors

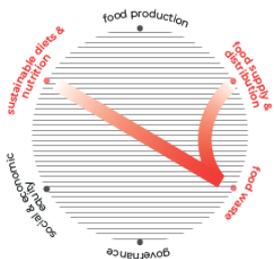
## BRUGES

BELGIUM

Title of Practice  
**BRUGES: FOOD WASTE  
REDUCTION IN HEALTHCARE  
INSTITUTIONS**

Milan Urban Food Policy Pact Category  
**FOOD WASTE**

Main impacts on other  
MUFPP categories



Contact  
**KARINE DE BATSELIER**  
Climate Coordinator



- [foodlab.brugge.be](http://foodlab.brugge.be)
- [www.wrap.org.uk](http://www.wrap.org.uk)
- [foodwastechallenge.eu/evaluating-projects](http://foodwastechallenge.eu/evaluating-projects)
- <https://bit.ly/2Lk2epX>

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CAU-PHEN-1075-18

#EUFoodCities

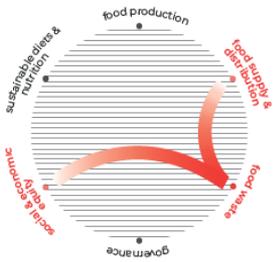


## GHENT BELGIUM

*Title of Practice*  
**GHENT: FOODSAVERS PLATFORM**

*Milan Urban Food Policy Pact Category*  
**FOOD WASTE**

*Main impacts on other MUFPP categories*



**Contact**  
**WOUTER VERSTRAETE**  
*Staff Policy Support for Social Services*

### Context

At the city level there are significant volumes of excess food available through conventional wholesale distribution and retail systems. At the same time, cities are facing rising levels of food poverty and malnourishment. The City of Ghent further researched the situation and noticed that there was a higher volume of excess food than what was being recovered and redistributed by social organizations. As a response, the Municipality led a two-year process of discussion and research with the involvement of many stakeholders. The outcome has been the launch of a **logistics and information platform** to better match volume and demand for excess food, reducing food waste and fostering social inclusion.

### Overview of the food practice

In March 2017, the Foodsavers platform was launched. It brings together excess food from the wholesale market and the local retailers and redistributes them to social organizations in Ghent. The organizations involved are a mix of food banks, social restaurants and social supermarkets. The goal is threefold:

- **climate target:** CO<sub>2</sub> emissions are reduced through food waste saving. According to the FAO, 100 tonnes of food waste in Ghent would be equivalent to 254 tonnes of CO<sub>2</sub> emissions. The goal is to avoid at least 100 tonnes of food being wasted in 2017;
- **social employment:** the Foodsavers platform is being operated by long-term unemployed people. The project trains them in logistics skills and prepares them for the regular labour market. The goal is to employ 10 to 12 unemployed people who face difficult access to the labour market; and
- **fighting poverty:** the excess food is being distributed to people in need. It prioritizes access to fresh and healthy food, improving the diets of disadvantaged groups.

### Results and lessons learned

After ten months of operation, the results achieved by the Foodsavers platform have surpassed all expectations. The first achievements are the following:

- 300.34 tonnes of food redistributed composed of 64 395 items;
- 24 retailers, one wholesale market, two distribution centers of retailers, one organic farm and one company provided food products;
- 58 local charity organisations and social restaurants based in Ghent distributed food to people in need;
- 18 971 people in need received products or food baskets.
- 68 percent of fresh fruit and vegetables on total amount of products redistributed;
- reduction of 762 tonnes of CO<sub>2</sub>; and
- employment of 19 people coming from long-term unemployment.

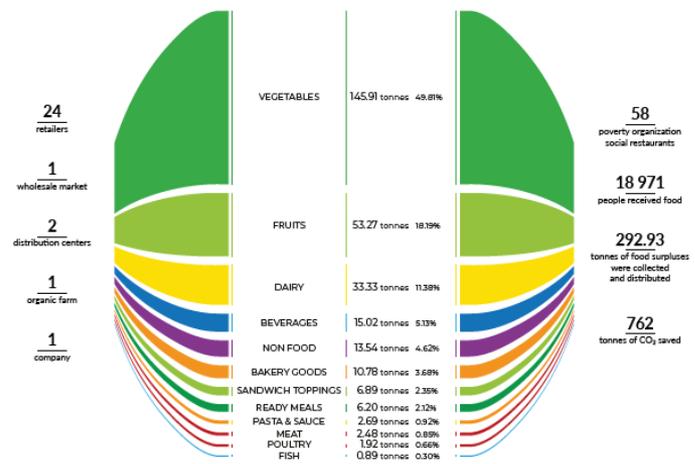
The practice of Ghent highlights the role of cities within the food system. Lots of initiatives happen at a very local, small-scale level. The role of the city can be of importance in creating bigger volumes and bigger impact. For example, it provides professionalization for local volunteering initiatives. This also implies that the role of a city does not remain limited to policy work and legislation but that it takes up an important **operational role** focused on building societal value. Another innovative aspect is the systemic approach in tackling food waste. Many cities start to tackle food waste in different ways. The system developed in Ghent has the advantage to address different strategic issues: reducing food waste, fighting poverty and strengthening employment capacities. This has been possible thanks to an extensive thematic and **multi-stakeholders inclusion**. The project is the result of a structural collaboration between different departments within the city: the climate and environment department, the department of work and social welfare. The project responds to the objectives of those three departments involved and is also the result of bringing together their respective budgets in order to make it possible. The project had to go through several approval procedures within the city management system.



Municipality of Ghent

# Winning city on Milan Pact Award 2018

### FOOD COLLECTION AND DISTRIBUTION PROCESS



Source: Ghent Public Centres for Social Welfare and the City of Ghent.

- <https://bit.ly/279qa2L>



## RIGA LATVIA

*Title of Practice*

### RIGA: FROM FOOD WASTE TO HEALTHY OFF-SEASON FOOD

*Milan Urban Food Policy Pact Category*  
**FOOD WASTE**

 **Special Mention  
2016**

*Main impacts on other  
MUFPF categories*



*Contact*  
**ANDA ZANDBERGA**  
Public Relations and Education  
Programme Manager

#### Context

Along the border which separates the Municipality of Riga and the Municipality of Stopini lies the **waste landfill Getlini**. About 50 percent of all waste produced in Latvia (approximately 300 000 tonnes annually) is transported to this site. Over 40 percent of the total waste is biomass. Given the high volume of waste deposits, efficient reuse of this waste has been an unsolved issue for many years. In fact, when disposed, food waste creates landfill gas that could be properly collected and utilised in order to limit negative impacts to the environment and soil. Moreover, the surrounding areas suffered from limited growth and development opportunities because of the landfill, leading to an increase in crime and social degradation. The Municipality of Riga decided to intervene, turning Getlini into an environmentally friendly, innovative and ecological waste management site.

#### Overview of the food practice

The renovation plan for the Getlini landfill is based on two main pillars: operational practice and social education. On the operational side, **food waste** is deposited in environmentally safe biodegradable cells. The landfill gas that forms in the cells is channelled to the Getlini power unit and transformed into energy. The impact of waste on the environment is reduced to a minimum: the Getlini ecological landfill is one of the largest producers of **green energy** in Latvia (31 to 33 gWh annually). The side-product of energy production is heat (20 gWh in 2015) used for **greenhouses** that are located in the vicinity of the landfill and operated by Getlini EKO.

The greenhouses provide off-season tomatoes to the citizens of Riga, distributed through the primary supermarket chains. The company has developed a "one-touch" method in gathering, packing and distributing products to the wholesaler. This method allows food harvesting to occur as late as possible to keep products safe and unspilled, while also enabling them to grow to full maturity for maximum nutrition value. It should also be noted that only organic practices and natural organisms are used to grow healthy tomatoes. During the off-season period, the greenhouse produces 390 tonnes of high-quality tomatoes, whose nutrition value is high compared to imported tomatoes during the winter months.

In 2017, Getlini opened its third greenhouse which is suitable for growing cucumbers. This technologically-advanced greenhouse is the first in the world to use LED lighting as the sole source for growing cucumbers. Now the off-season tomatoes are supplemented by long and short cucumbers.

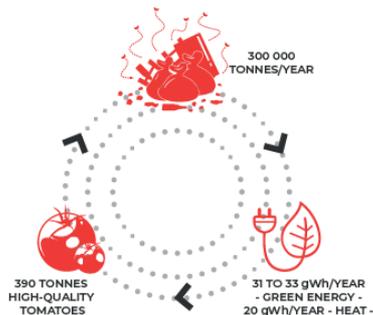
An **innovative educational programme** has been designed to increase awareness in Latvian society about the life-cycle of household waste, including the process of recycling and food waste reduc-

tion. The company organizes **free field trips** to the landfill site and traveling seminars on waste recovery-issues. The field trips are available for pre-schools, schools, universities, companies, tourist groups, environmental activists, etc. Specific educational trips related to waste systems design, off-season food production and environmental benefits of waste re-use are designed for future engineers, physicists, agronomists, ornithologists and specialists in other fields.

#### Results and lessons learned

This ecological management practice has created a **chain of co-benefits** including food waste turned into green energy and highly nutritious food with significant positive environmental impacts. As a result of this practice the atmosphere is protected from 2000 m<sup>3</sup> of environmentally harmful gases per hour and Riga's citizens are provided with healthy off-season vegetables. This is important, since Latvia as a Nordic country is deprived of quality vegetable supplies in winter and spring seasons, preventing its population from accessing healthy, fresh and **balanced local dietary choices**. The Municipality also supports sustainable nutrition education programmes, breaking down assumptions that landfills are not proper places for greenhouses and food production. Moreover, the vicinity of the landfill has been transformed into a green suburb of Riga, a socially active and educational destination for ornithologists from all over the world and for government, municipal and corporate delegates interested in urban regeneration. It has become a **safe environment** for both citizens and visitors. The landfill is also among the biggest employers in the suburb where almost 17 percent of all employees in the neighborhood work at the site.

This practice offers an innovative, systemic approach to food waste. The Municipality of Riga generated a process that uses local resources to create value and protect the environment and the surrounding areas, while also fostering healthy dietary habits and sustainable food production.



 - [www.getlini.lv/en/](http://www.getlini.lv/en/)  
- [www.facebook.com/getlini/](https://www.facebook.com/getlini/)  
- [www.youtube.com/watch?v=BCTzHlWTPv4](https://www.youtube.com/watch?v=BCTzHlWTPv4)



 As a result of this practice the atmosphere is protected from **2 000 m<sup>3</sup> / hour of environmentally harmful gases**



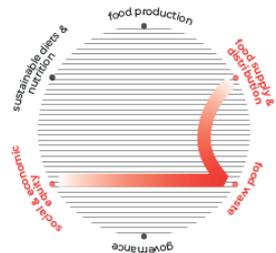
## MILAN ITALY

Title of Practice

### MILAN: A COMPREHENSIVE FOOD POLICY TO TACKLE FOOD WASTE

Milan Urban Food Policy Pact Category  
**FOOD WASTE**

Main impacts on other  
MUFPP categories



Contact  
**Andrea Magarini**  
Food Policy Officer of the Municipality of  
Milan

#### Context

In 2014, the Municipality of Milan began to study its local food system, focusing on the urban cycle of food, the underlying context and the actors operating in the city on food matters. In 2015, this analysis was shared with approximately 700 stakeholders through a process of public consultation, which led to the definition and approval of a **comprehensive urban food policy**. This strategy identifies five main areas of intervention, including the fight against food waste, considered one of the top priorities of the Municipality. Additionally, in 2016, a specific set of guidelines was created with the aim of tackling food losses and waste at the local level, feeding grassroot actions and top-down interventions.

#### Overview of the food practice

Over the last year, several actions were initiated by the Municipality of Milan with the objective of reducing food waste across the city. One of the most relevant is a **discount on the waste tax**, approved by the Municipal Council in February 2018. This measure reduces by 20 percent the tax on waste in favour of those food businesses (supermarkets, restaurants, canteens, producers etc.) that donate their food losses to charities. The action is coordinated by different departments of the municipality (fiscal, environmental, food policy), as part of a multi-sectoral working group. The measure further supports the mapping, strengthening and spreading of food donation initiatives in the city, mainly led by non profit organizations.

Alongside with the waste tax reduction, the Municipality of Milan is focusing its action on the elements of the food system that can be controlled directly, such as school canteens. Currently, there are 106 canteens (on a total of 418) affiliated to a food bank for the recovery and redistribution of 140 tonnes of fruit and bread. Additionally, in order to prevent fruit waste at the end of each lunch, the municipal agency for school canteens (Milano Ristorazione) designed a specific program where children receive fruit in their classrooms as a morning snack, instead of at the end of the meal. Moreover, 31 000 reusable doggy bags are distributed to children, who can bring home non perishable leftovers.

The Municipality of Milan is also active in private-public partnership aimed at fighting food waste. The City's Food Policy Office has recently facilitated an agreement between a University lab and an association of private actors (supermarkets and food companies) to develop the first **"Local Food Waste Hub"**. This pilot project, implemented in three neighbourhoods, promotes the redistribution of food losses at the local level in a space offered by the Municipality of Milan. In the course of the pilot year the input and output flows of donation in the hub will be monitored and this knowledge will be spread to other 35 local organizations mapped by the Food Policy.

According to a preliminary analysis, each hub will be able to gather and redistribute approximately 70 tonnes of food per year.

Lastly, the intervention in favour of food waste reduction is targeting the open street markets, supporting a local association in the collection of surpluses at the end of the daily market activity. The test involves 11 pilot markets, with a direct engagement of the beneficiaries.

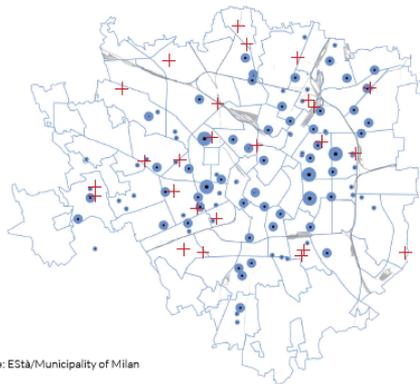
#### Results and lessons learned

Despite their recent implementation, the initiatives supported by the City of Milan already show promising results. For example, the reduction of the food waste tax benefitted approximately 10 000 people, with an impact of EUR 1.8 milio. This allows for a further reduction, reaching up to 50% over the following year.

A key feature of the success of the Food Policy of Milan is the **multilevel governance approach**, which gathers representatives from the Municipal, Metropolitan, and regional authorities. The concerted implementation of the actions described above allowed the Municipality of Milan to learn four key lessons:

- cities need to analyze their food system in order to tackle food losses. It is important to have local data to make the correct decisions, observing the main drivers shaping the food system of the city;
- municipalities can act on the food system by facilitating the relations between the concerned actors, playing a role as a community leader and not just as an administrative power;
- cities must implement umbrella actions (creation of platforms, networks, ...) able to create the favorable context for the creation of initiatives involving social and economic actors;
- city networks play an important role in exchanging information and inspiring activities at different level. It is equally fundamental to have **municipal officers dedicated to food matters**, that can engage actors and facilitate common initiatives among departments, municipal agencies, research centers, food banks, social actors and major food businesses.

In conclusion, the growing importance of cities in fighting food waste is undeniable: the municipalities are key players to achieve a 50% waste reduction by 2030.



Source: ESTà/Municipality of Milan



- [https://www.comune.milano.it/wps/portal/està/food\\_policy\\_milano/Milan+Food+Policy](https://www.comune.milano.it/wps/portal/està/food_policy_milano/Milan+Food+Policy)

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## Best 50 cases Milan Pact Award



**445 EUR/MONTH**  
**1 FAMILY FOOD**  
**EXPENDITURE**



**450 EUR/YEAR**  
**1 FAMILY DOMESTIC**  
**FOOD WASTE**

35% fresh products  
19% bread  
16% fruits & vegetables

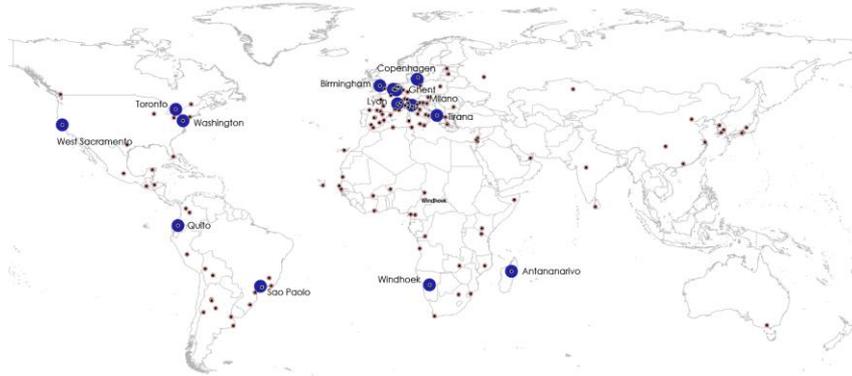
SCHOOL CANTEENS  
AFFILIATED TO A FOOD BANK

- 14 - 300 meals/day
- 301 - 590 meals/day
- 591 - 880 meals/day

+ Milan municipal kitchens

The Milan Urban Food Policy Pact with FAO built a **monitoring framework** to assess the progress made by cities towards more sustainable food systems, in order to:

- **facilitate the design of policies** by creating *evidence base*, helping set *priority areas*, defining *target interventions*, *monitoring progress* made
- **mobilize resources** for action (internal and external)
- communicate, **share** experiences and lessons learnt



A group of **13 cities** are actively contributing to finalize the indicators and the Monitoring Framework.

**Copenhagen, Funchal, Ghent, Milan, Birmingham, Tirana, Toronto, Washington DC, West Sacramento, Windhoek, Antananarivo, Austin, Quito, Sao Paulo**

# 44 INDICATORS FOR MONITORING THE URBAN FOOD SYSTEMS

CATEGORIES	INDICATORS
Food Governance	and programmes
	Indicator 2: Presence of an active multi-stakeholder food policy and planning structure
	Indicator 3: Presence of a municipal urban food policy or strategy and/or action plans
	Indicator 4: Presence of an inventory of local food initiatives and practices to guide development and expansion of municipal urban food policy and programmes
	Indicator 5: Presence of a mechanism for assembling and analysing urban food system data to monitor/evaluate and inform municipal policy making on urban food policies
	Indicator 6: Existence of a food supply emergency/food resilience management plan for the municipality (in response to disasters; vulnerabilities in food production, transport, access; socio-economic shocks, etc.) based on vulnerability assessment
Sustainable Diets and Nutrition	Indicator 7: Minimum dietary diversity for women of reproductive age
	Indicator 8: Number of households living in "food deserts"
	Indicator 9: Costs of a nutritious food basket at city/community level
	Indicator 10: Individual average daily consumption of meat
	Indicator 11: Number of adults with type 2 diabetes
	Indicator 12: Prevalence of stunting for children under 5 years
	Indicator 13: Prevalence of overweight or obesity among adults, youth and children
	Indicator 14: Number of city-led or supported activities to promote sustainable diets
	Indicator 15: Existence of policies/programmes that address sugar, salt and fat consumption in relation to specific target groups
	Indicator 16: Presence of programmes/policies that promote the availability of nutritious and diversified foods in public facilities
Indicator 17: Percentage of population with access to safe drinking water and adequate sanitation	
Social and economic Equity	Indicator 18: Percentage of food insecure households based on the Food Insecurity Experience Scale (FIES)
	Indicator 19: Percentage of people supported by food and/or social assistance programmes
	Indicator 20: Percentage of children and youth (under 18 years) benefiting from school feeding programmes
	Indicator 21: Number of formal jobs related to urban food system that pay at least the national minimum or living wage
	Indicator 22: Number of community-based food assets in the city
	Indicator 23: Presence of food-related policies and targets with a specific focus on socially vulnerable groups
	Indicator 24: Number of opportunities for food system-related learning and skill development in i) food and nutrition literacy, ii) employment training and iii) leadership
	Indicator 25: Number of city residents within the municipal boundary with access to an (urban) agriculture garden
	Indicator 26: Number of city residents within the municipal boundary with access to a municipal area
	Indicator 27: Surface area of (potential) agricultural spaces within the municipal boundary
Food Production	Indicator 28: Proportion of total agricultural population –within the municipal boundaries- with ownership or secure rights over agricultural land for food production, by sex
	Indicator 29: Proportion of agricultural land in the municipal area under sustainable agriculture
	Indicator 30: Proportion of agricultural land in the municipal area under sustainable agriculture
	Indicator 31: Number of municipal food processing and distribution infrastructures available to food producers in the municipal area
Food Supply and Distribution	Indicator 32: Proportion of local/regional food producers that sell their products to public markets in the city
	Indicator 33: Proportion of local/regional food producers that sell their products to public markets in the city
	Indicator 34: Existence of policies/programmes that address the reduction of GHG emissions in different parts of the food supply chain
	Indicator 35: Presence of a development plan to strengthen resilience and efficiency of local food supply chains logistics
Food Waste	Indicator 36: Number of fresh fruit and vegetable outlets per 1000 inhabitants (markets and shops) supported by the municipality
	Indicator 37: Annual municipal investment in food markets or retail outlets providing fresh food to city residents, as a proportion of total (investment) budget
	Indicator 38: Proportion of food procurement expenditure by public institutions on food from sustainable, ethical sources and shorter (local/regional) supply chains
	Indicator 39: Presence of food safety legislation and implementation and enforcement procedures
Food Waste	Indicator 40: Existence of support services for the informal food sector providing business planning, finance and development advice
	Indicator 41: Total annual volume of food losses & waste
	Indicator 42: Annual number of events and campaigns aimed at decreasing food loss and waste
	Indicator 43: Presence of policies or regulations that address food waste prevention, recovery and redistribution
Indicator 44: Total annual volume of surplus food recovered and redistributed for direct human consumption	

The metrics will measure the **advancement of single actions** for a comprehensive assessment of the local food system also in relation with **11 SDGs targets**.

An **implementation-oriented guide** is associated with each indicator.

**Milan Urban Food Policy Pact Monitoring Framework**  
Draft version, July 2018

**Indicator 28: Total annual volume of surplus food recovered and redistributed for direct human consumption**

**MUFPF framework of actions' category: Food waste**

The indicator measures the weight of surplus food recovered and redistributed for direct human consumption using the metric of total weight, excluding the weight of animal products as well as food lost in other and post-harvest control of a producer and sold in the final urban consumer or food.

**Overview table:**

SDG/Target	Key Metric	Key Data
SDG 12.3	Reduce food waste	Weight of surplus food recovered and redistributed for direct human consumption

an overview of the evidence and value of the multi-stakeholder food policy and planning body (policy) and the presence of a dedicated body of citizens and/or representatives (groups) to monitor and evaluate a broader food related survey. Participants of these or specific stakeholders on other working parties should be invited to the meeting.

**Data collection and disaggregation:**

The indicator requires the following primary data to be collected and then, individual member units that need to make their own contribution before discussing this in the larger group. Information is to be collected on the total weight of surplus food recovered and redistributed for direct human consumption, by gender, age, and other relevant characteristics. The data should be disaggregated by gender, age, and other relevant characteristics. Specific data should be collected on the weight of surplus food recovered and redistributed for direct human consumption, by gender, age, and other relevant characteristics. The data should be disaggregated by gender, age, and other relevant characteristics.

**Key messages:**

- The indicator should be implemented with a specific focus on socially vulnerable groups.
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## **Indicator 41**

Total annual **volume of food losses & waste**

## **Indicator 42**

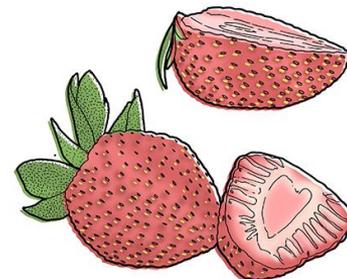
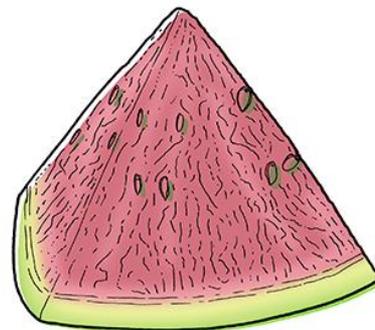
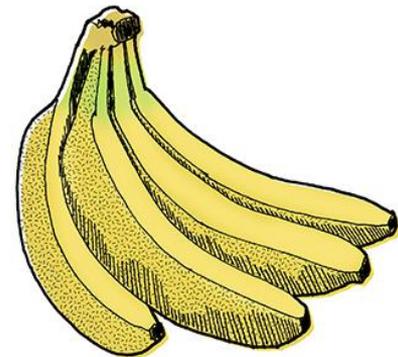
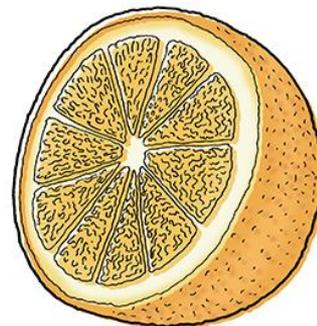
Annual number of **events and campaigns** aimed at decreasing food loss and waste

## **Indicator 43**

Presence of **policies or regulations** that address food waste prevention, recovery and redistribution

## **Indicator 44**

Total annual volume of **surplus food recovered and redistributed** for direct human consumption



### ***Unit of measurement and analysis***

Tonnes or kilograms of food waste  
Weight of food entering municipal waste stream

### ***Variables need to be measured***

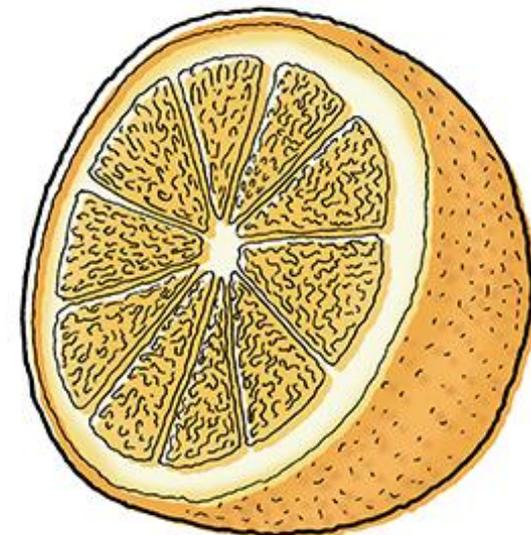
Food waste generated at different at system stages  
Type of food wasted  
Edible vs inedible food  
Destination of food waste (landfill, composting, redistribution)

### ***Possible sources of information and data***

Municipal waste management department  
Private haulage companies

### ***Expertise required***

No specific expertise



**HAVE A BASELINE OF DATAS ON WHICH CO-DESIGN  
POLICIES, ACTIONS AND INITIATIVES RELATED TO FLW**

### ***Unit of measurement and analysis***

Tonnes or kilograms of food waste  
Weight of food entering municipal waste stream

### ***Variables need to be measured***

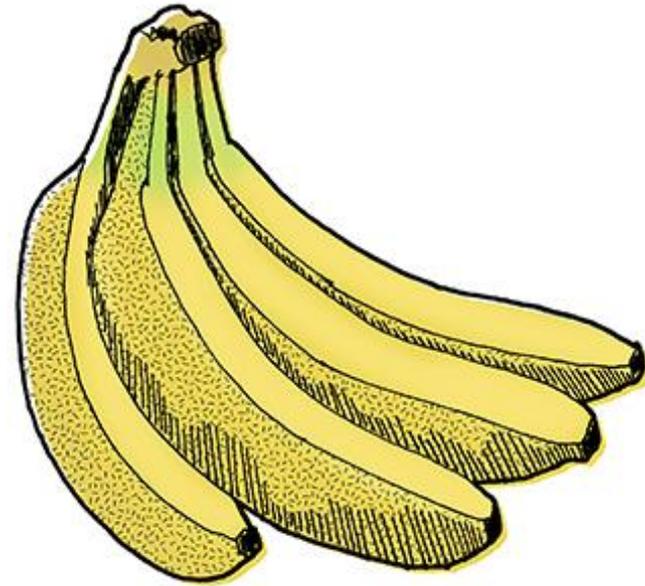
Safe and nutritious food recovered  
Commodity or type of food recovered  
Kcal or nutrition content of different types of food losses

### ***Possible sources of information and data***

Social and welfare entities  
Municipal departments for agriculture, social affairs,  
Food banks, charities, social bodies  
Report

### ***Expertise required***

socio-economic / regulatory / human nutrition



**HAVE AN OVERVIEW OF ALL THE IMPACTS OF THE  
ACTIONS ON FOOD LOSSES REDISTRIBUTED ACTIVE IN CITY  
AND ACTIVATE SPECIFIC RELATIONS WITH FOOD BANKS**

### ***Unit of measurement and analysis***

Annual number of events and campaigns

Data disaggregation by type of activity and target audience

### ***Variables need to be measured***

Type of activities

Target sectors (households, business, foodservice, etc...)

If applicable: the impact on food waste reduction in kg

### ***Possible sources of information and data***

Civil society annual report

Annual report of organizations that implement FLW actions

Survey among relevant stakeholders

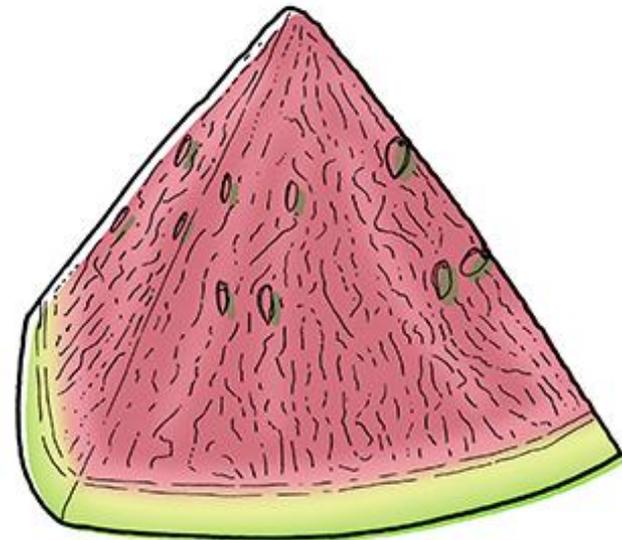
Lifelong learning / education institutions

Records from environmental departments

### ***Expertise required***

Data analysis, survey design and implementation

**HAVE AN OVERVIEW AND COORDINATE THE EFFORT  
OF ALL THE ACTIONS ON RAISING AWARENESS  
THAT COULD BE ORIENT CITIZENS' LIFESTYLE**



### ***Unit of measurement and analysis***

Number (and types) of policies and regulations

Number (and types) of information and communication mechanisms and target groups

Resources allocated (human, financial) for each measure

### ***Variables need to be measured***

Level of implementation, enforcement, tools available

Number and type of target groups

Monitoring, evaluation and updates mechanisms

Reporting towards SDG 12.3 mechanisms

### ***Possible sources of information and data***

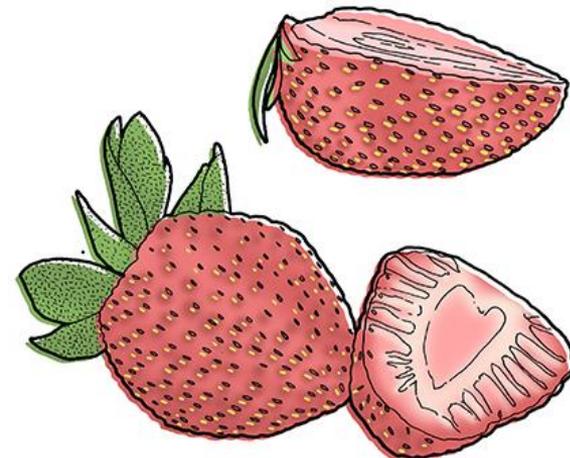
Social protection and welfare municipal/national report

Annual report of organizations active in FLW

### ***Expertise required***

Policy analysis

**HAVE AN OVERVIEW AND COORDINATE THE EFFORT OF ALL THE PUBLIC ACTION EXISTING IN CITY AND IN OTHER LOCAL INSTITUTIONS**



## MILAN URBAN FOOD POLICY PACT

Session on FLW in Tel Aviv at 4<sup>th</sup> Gathering  
Milan Pact Awards cases on FLW  
<http://www.milanurbanfoodpolicypact.org/50-selected-practices/>



## EUROCITIES

Webinar on FLW cases of Milan and Bruges  
<http://www.eurocities.eu/eurocities/news/Food-Waste-cities-to-the-rescue-What-have-we-learned-in-just-a-webinar-WSP0-AZXGNJ>  
Meeting in Milan with 8 cities to focus pilot on Food Waste  
<http://www.refreshcoe.eu/resources/food-losses-and-waste-in-european-cities/>



## C40

Webinars with cities on FLW and C40 Zero Waste Declaration  
<https://www.c40.org/other/zero-waste-declaration>



## ELLEN MACARTHUR FOUNDATION

Cities and Circular Economy for Food  
<https://www.ellenmacarthurfoundation.org/our-work/activities/cities-and-the-circular-economy-for-food>



1. First step to reduce food losses is to know about them. Cities need to **analyse their food system** and public drivers. The **Monitoring Framework** could facilitate the exploitation of a common urban system.
2. Cities need to co-**create umbrella initiatives** on their specific institutional drivers (like platforms, networks, incentives, campaigns etc.) in order to offer concrete actions to their stakeholders and reach a common goal.
3. Cities need **municipal officers dedicated to food policy**. These figures are able to offer a multidimensional approach engaging and facilitating initiatives that include different city departments, municipal agencies, research centers, food banks, main stakeholders and local actors.
4. In several cases the prioritization of food waste at local level begins with actors outside the city government. As food systems evolve over time, the **benefits of civic participation and inclusion can help to alleviate the challenges addressed**.

# UPDATE ON EUROPEAN CITIES' EXPERIENCE IN FOOD WASTE PREVENTION

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#MUFPP

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Vagel, 2 October 2018

EU Platform Food Losses and Waste